

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-5. (Cancelled)

6. (Currently Amended) A method for modulating a target gene in a plant cell, said method comprising introducing into said plant cell:

a first nucleic acid molecule comprising a recombinase gene operably linked to an expression control sequence and signal sequences recognized by a recombinase encoded by said recombinase gene,

a second nucleic acid molecule comprising [[a]] said target gene and signal sequences recognized by said recombinase encoded by the recombinase gene in the first nucleic acid molecule,

wherein said recombinase encoded by the recombinase gene in the first nucleic acid molecule, when expressed in said cell, excises a sequence in said first nucleic acid molecule that is located between said signal sequences in said first nucleic acid molecule, and the excision results in modulation of expression of said recombinase gene,

wherein said recombinase encoded by the recombinase gene in the first nucleic acid molecule, when expressed in said cell, inverts a sequence in said second nucleic acid molecule that is located between said signal sequences in said second nucleic acid molecule, and the inversion results in modulation of expression of said target gene,

wherein when the sequence inverted in said second nucleic acid molecule is said target gene, the expression of said target gene is inactivated, and

wherein the signal sequences for the first nucleic acid and the second nucleic acid are not the same sequences.

7-12. (Cancelled)

13. (Previously Presented) The method of claim 6, wherein said target gene encodes a disease resistance protein.

14. (Previously Presented) The method of claim 6, wherein expression of said recombinase encoded by the recombinase gene in the first nucleic acid molecule is induced in said plant within one week prior to harvest.
15. (Previously Presented) The method of claim 6, wherein said plant comprises a first and a second tissue, and said recombinase encoded by the recombinase gene in the first nucleic acid molecule is expressed in said first tissue, but not in said second tissue.
16. (Previously Presented) The method of claim 15, wherein said first tissue of said plant is a fruit and said second tissue of said plant is not a fruit.
17. (Previously Presented) The method of claim 6, wherein said signal sequences in said second nucleic acid molecule are in inverted orientation with respect to one another.
18. (Cancelled)
19. (Currently Amended) The method of claim 17, wherein said signal sequences in said second nucleic acid molecule flank an inverted positive regulatory element of said target gene, so that expression of said recombinase encoded by the recombinase gene in the first nucleic acid molecule results in inversion of said positive regulatory element, and ~~in~~activation of expression of said target gene.
20. (Currently Amended) The method of claim 17, wherein said signal sequences in said second nucleic acid molecule flank an inverted negative regulatory element of said target gene, so that expression of said recombinase encoded by the recombinase gene in the first nucleic acid molecule results in inversion of said negative regulatory element, and inactivation of expression of said target gene.
21. (Previously Presented) The method of claim 6, wherein said signal sequences in said first nucleic acid molecule flank the recombinase gene.
22. (Previously Presented) The method of claim 6, wherein said signal sequences in said first nucleic acid molecule flank a positive regulatory element of the recombinase gene.

APPLICANTS: Silver et al.

SERIAL NUMBER: 10/789,480

23. (Original) The method of claim 6, wherein said first nucleic acid molecule and said second nucleic acid molecule are present in the same vector.
24. (Original) The method of claim 6, wherein said first nucleic acid molecule and said second nucleic acid molecule are present in separate vectors.
25. (Previously Presented) The method of claim 6, wherein said recombinase encoded by the recombinase gene in the first nucleic acid molecule is selected from the group consisting of a *cre* recombinase and a FLP recombinase and the signal sequence is selected from the group consisting of lox sequences and FRT sequences.
- 26-34. (Cancelled)